

## THE INFLUENCE OF THE DILUTION OF SERUM UPON THE PHAGOCYTTIC INDEX.

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SOCIETY.

(With eight text-figs.)

When normal serum is progressively diluted with physiological salt solution, the opsonic activity is found to rise with the dilution to a certain point and then fall. This was noted by Wright and Douglas,\* and was confirmed during my work.† Dean‡ showed later that the phenomenon was probably caused by two factors, one of which causes a sharp rise from infinity to a point at the quarter dilution when another factor comes into play and, retarding the rapid rise, causes a fall in the curve from the half dilution to the undiluted serum. In my own experiment this point agreed with the  $\frac{1}{6}$  dilution, and, in Wright and Douglas's experiment, it was probably at the  $\frac{1}{12}$ . As Dean has taken the average of a greater number of experiments, his number is more trustworthy, although it must be remembered that he probably made his tests by the more modern method of using the serum and suspensions of corpuscles and bacteria in the ratio of 1:1:1, while both Wright and I used the older ratio of 3:3:1. The greater proportion of serum to saline might cause the differences between the points when the depressing action of the serum appears.

In endeavouring to account for the behaviour of the serum upon the dilution, much might be gained by remembering that opsonisation, while possibly not identical with, may still be closely related to agglutination. In a former paper I showed that they were probably identical; and recently Weil,|| in a

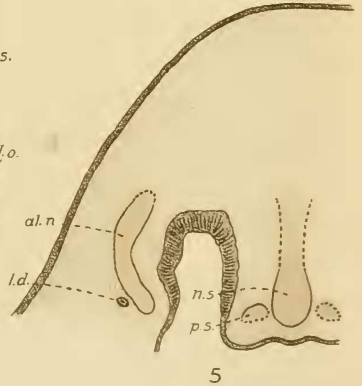
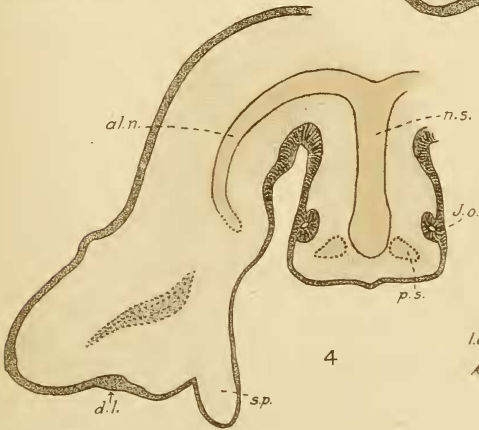
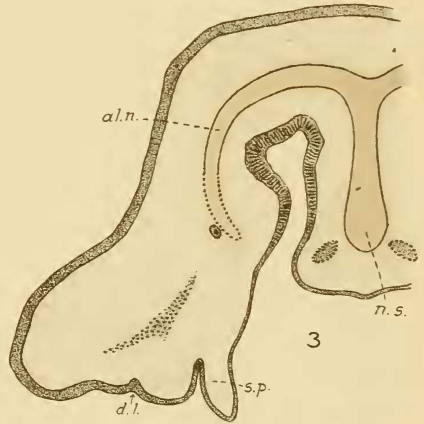
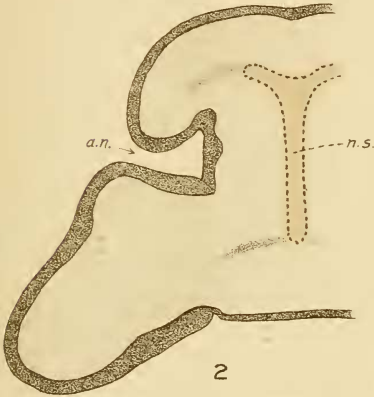
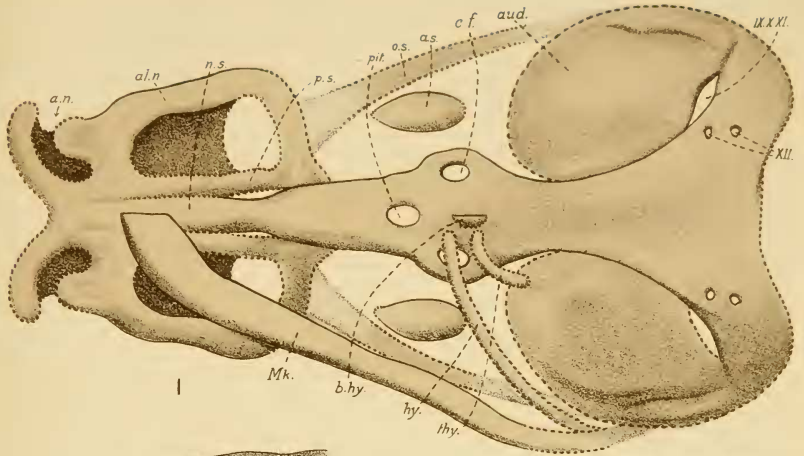
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\* Proc. Roy. Soc. 73, (1903), No.483, p.364.

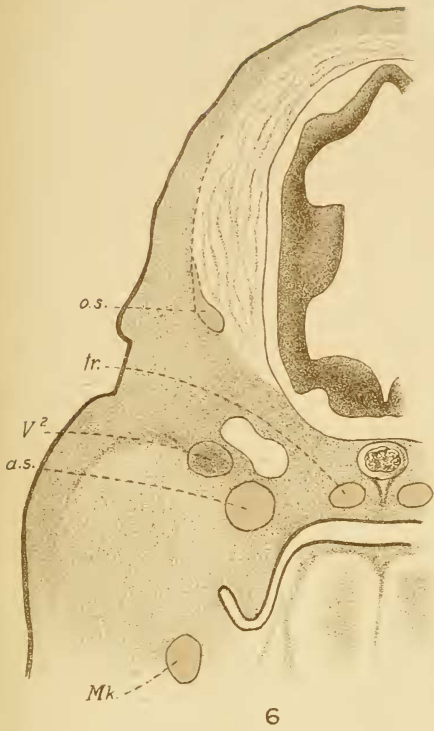
† These Proceedings, 1905, p.563.

‡ Proc. Roy. Soc 79, (1907), No.B 533, p.401.

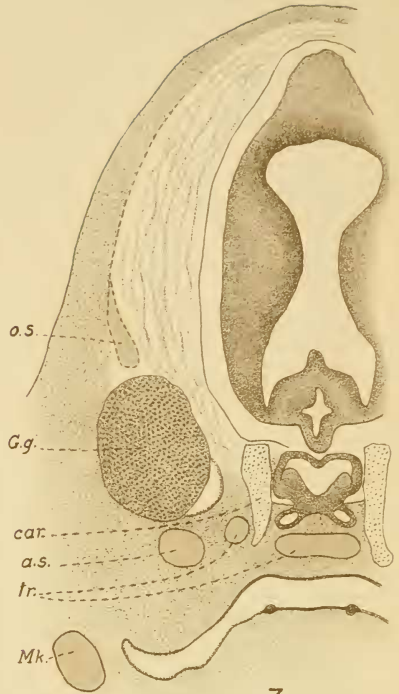
|| Centrlb. für Bakt. Ref. 42 (1908), p.345.



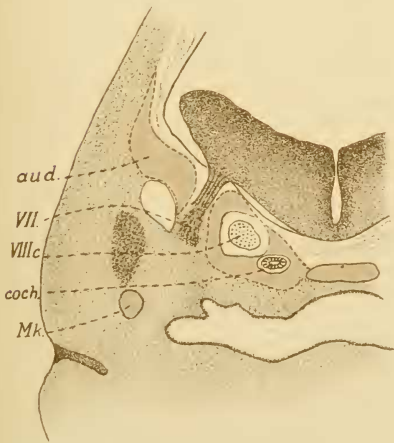




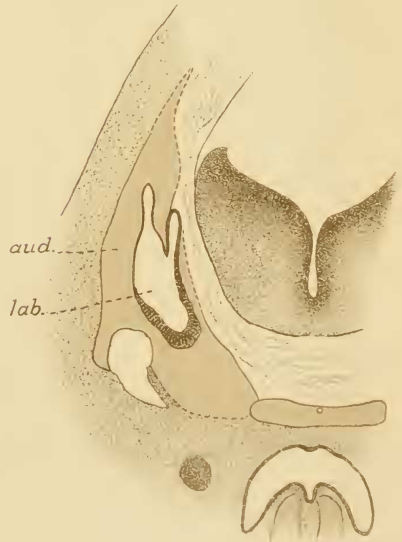
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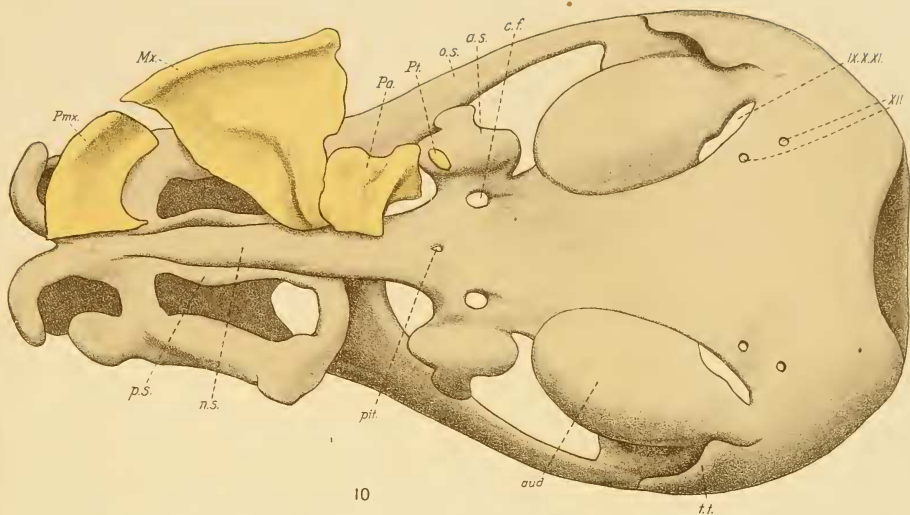
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R.B.del.

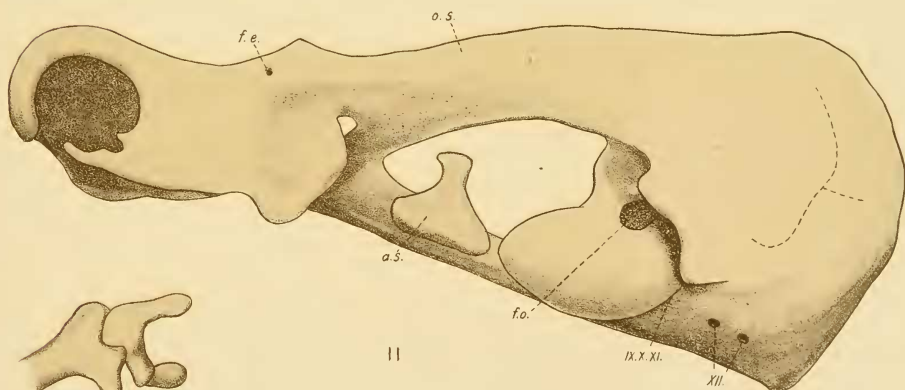
TRICHOSURUS VULPECULA (10 m m.)

JAB/17





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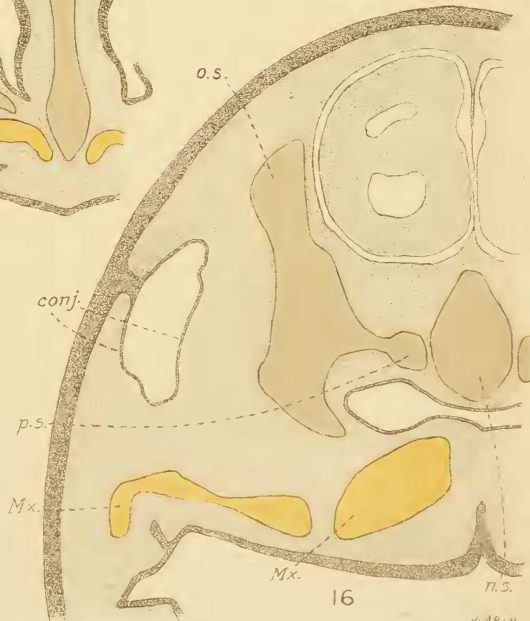
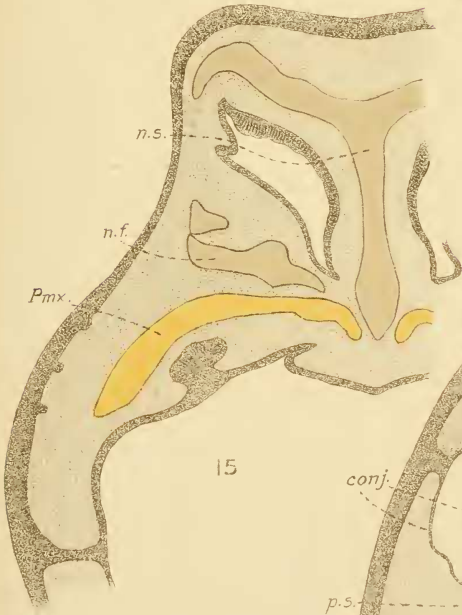
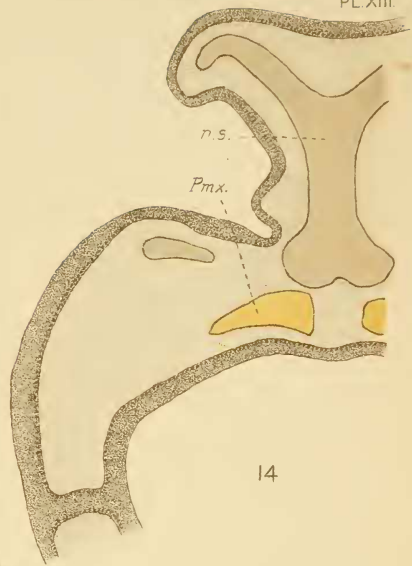
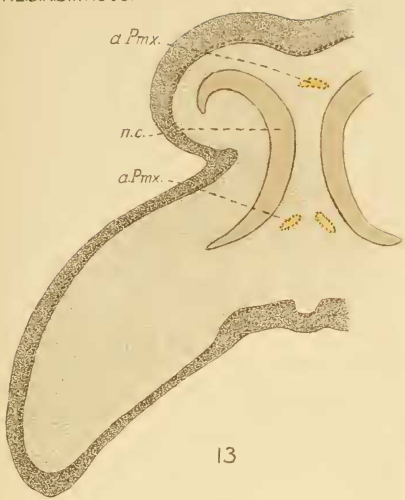


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11a.





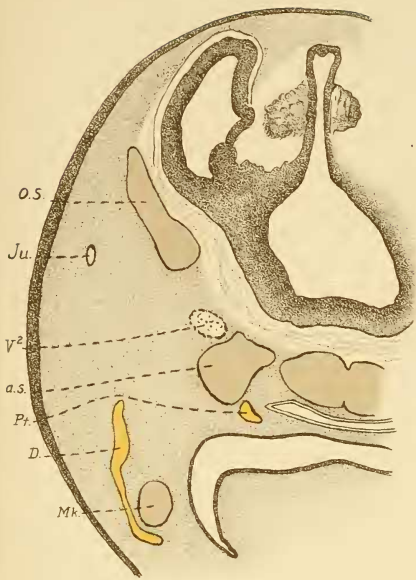
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TRICHOSURUS VULPECULA (14 m m.)

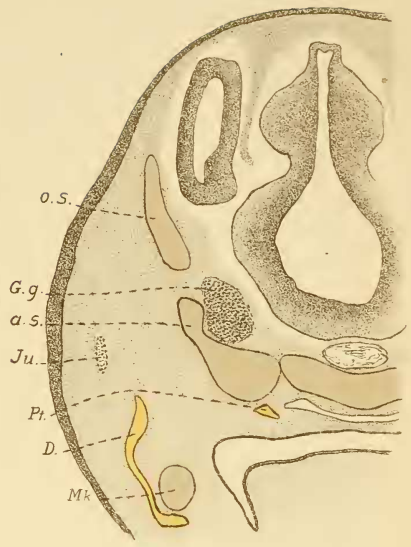
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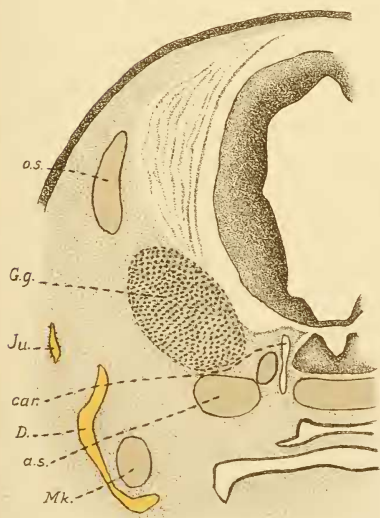




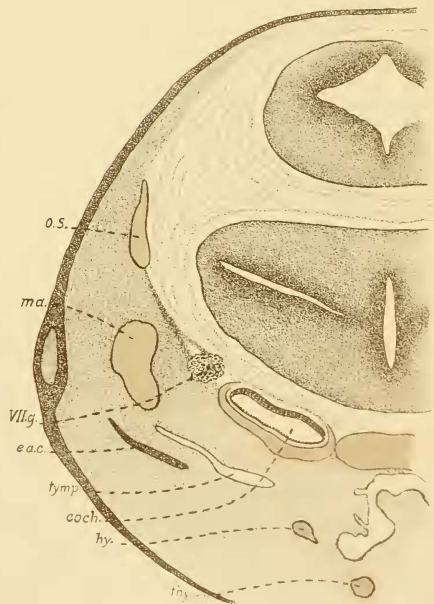
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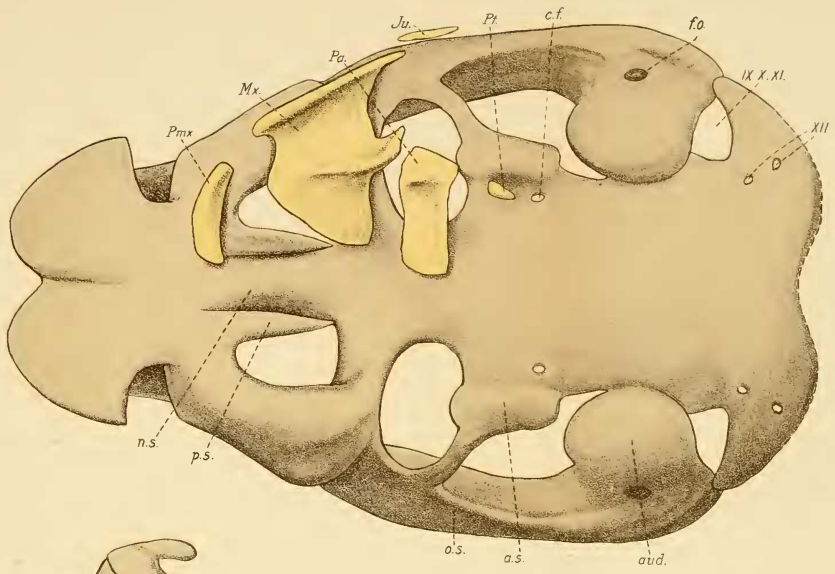


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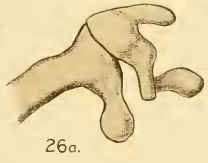


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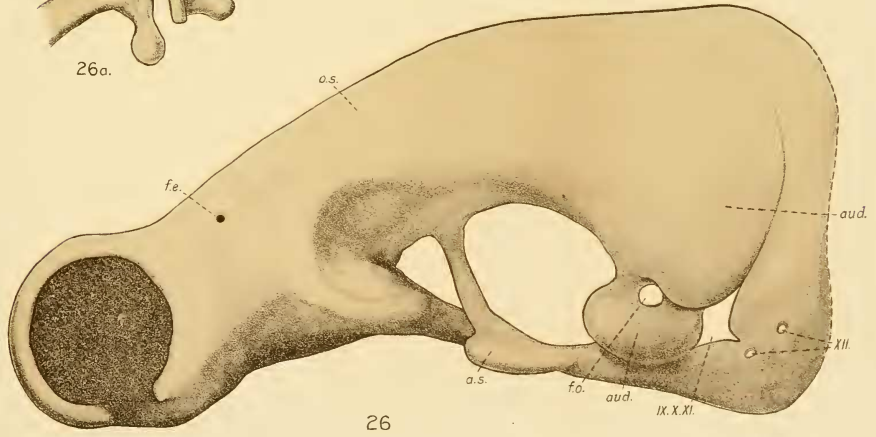




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26a.

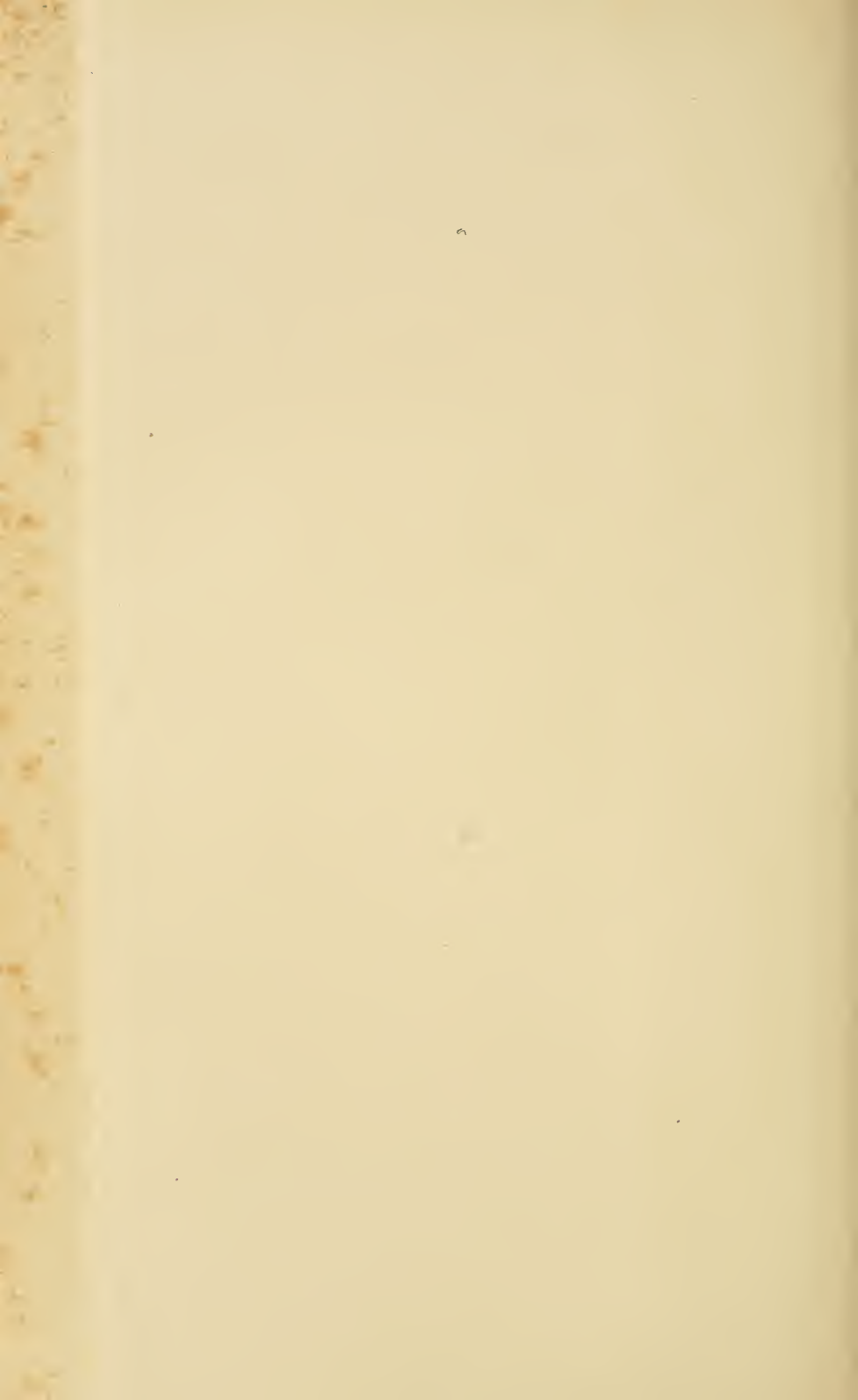


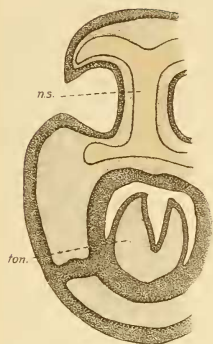
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R.B. del.

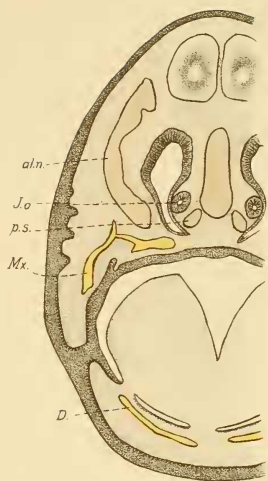
DASYURUS VIVERRINUS (8mm)

H.J.A.B. lwh

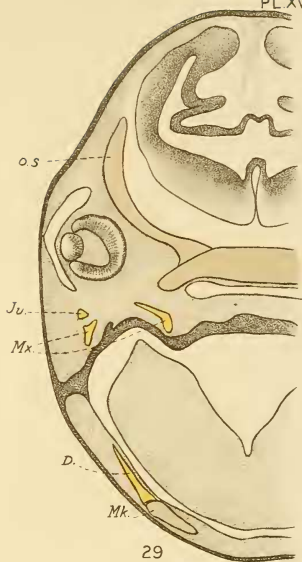




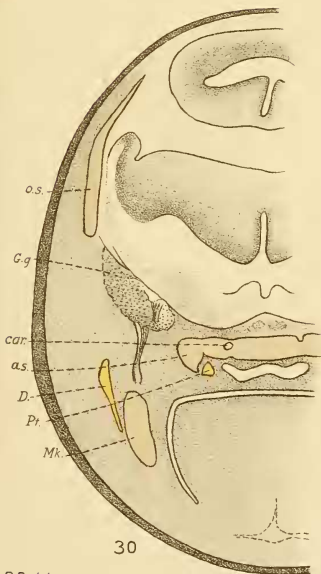
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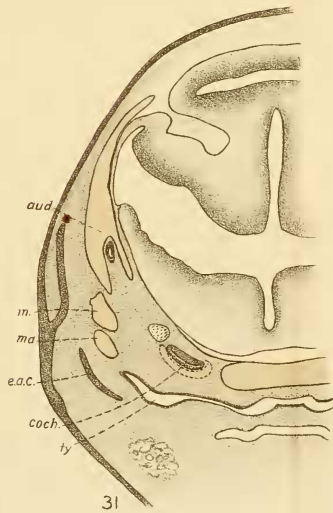
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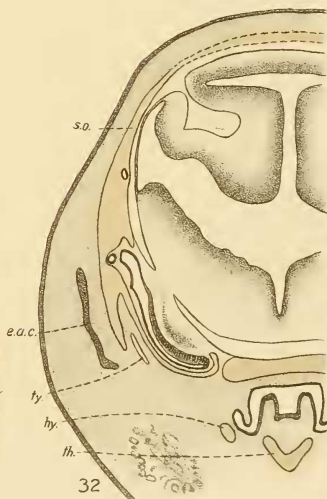
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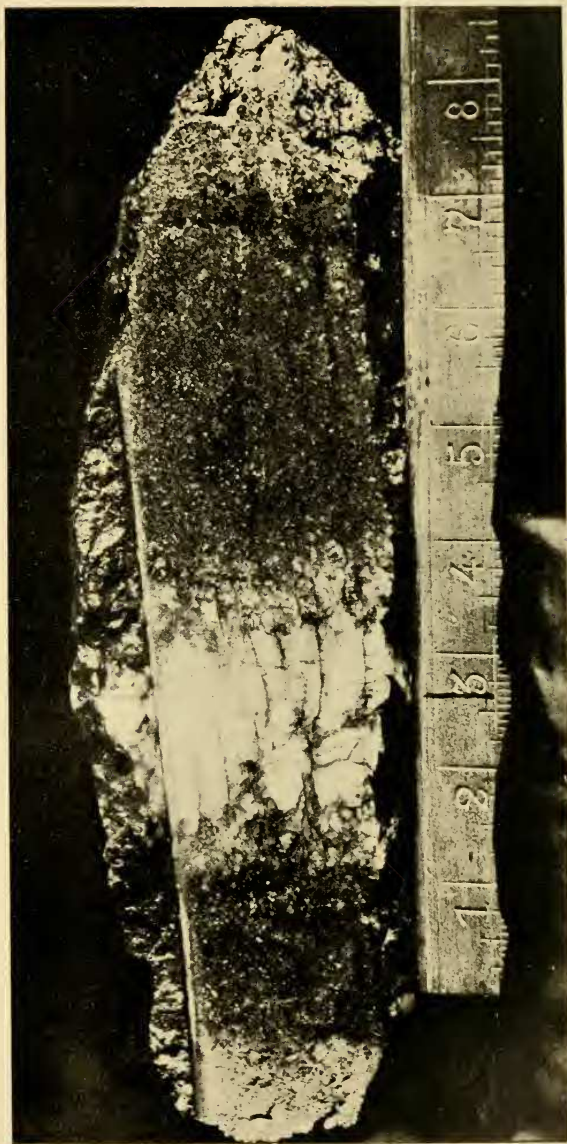
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R.B. del.

DASYURUS VIVERRINUS (8mm)

H.J.A.B. lith.





SECTION ACROSS FISSURE-VEIN, SHOWING NORMAL GRANITE ON EACH SIDE, AND VEIN-MATERIAL BETWEEN.